

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
24 July 2003 (24.07.2003)

PCT

(10) International Publication Number
WO 03/059940 A1

(51) International Patent Classification⁷: **C07K 7/06**

(21) International Application Number: **PCT/KR03/00121**

(22) International Filing Date: 20 January 2003 (20.01.2003)

(25) Filing Language: **Korean**

(26) Publication Language: **English**

(30) Priority Data:
10-2002-0003184 19 January 2002 (19.01.2002) **KR**

(71) Applicant and

(72) Inventor: **LEE, Sang-Kyou** [KR/KR]; 101-205, Jamwon Hyundai Apt., 53, Jamwon-dong, Seocho-gu, 137-030 Seoul (KR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **LEE, Seung-Kyou** [KR/KR]; 110-501, Lucky Hana Apt., Sinseong-dong, Yuseong-gu, Daejeon 305-721 (KR). **SUH, Byung-Fhy** [KR/KR]; 5-501, Samick Apt., Samseong 2-dong, Gangnam-gu, Seoul 135-092 (KR). **CHAE, Wook-Jin** [KR/KR]; C-502, Sujeong Apt., Yeouido-dong, Yeongdeungpo-gu, Seoul 150-010 (KR). **KIM, Jong-Bum**

[KR/KR]; 46-18, Malli-dong 2-ga, Jung-gu, Seoul 100-372 (KR). **LEE, Jong-Sun** [KR/KR]; 102, 188-87, Yeonhui 1-dong, Seodaemoon-gu, Seoul 120-111 (KR).

(74) Agent: **NAM, Sang-Sun**; 8th Fl., The Korea Chamber of Commerce & Industry Bldg., #45, Namdaemoonno 4-ga, Jung-gu, Seoul 100-743 (KR).

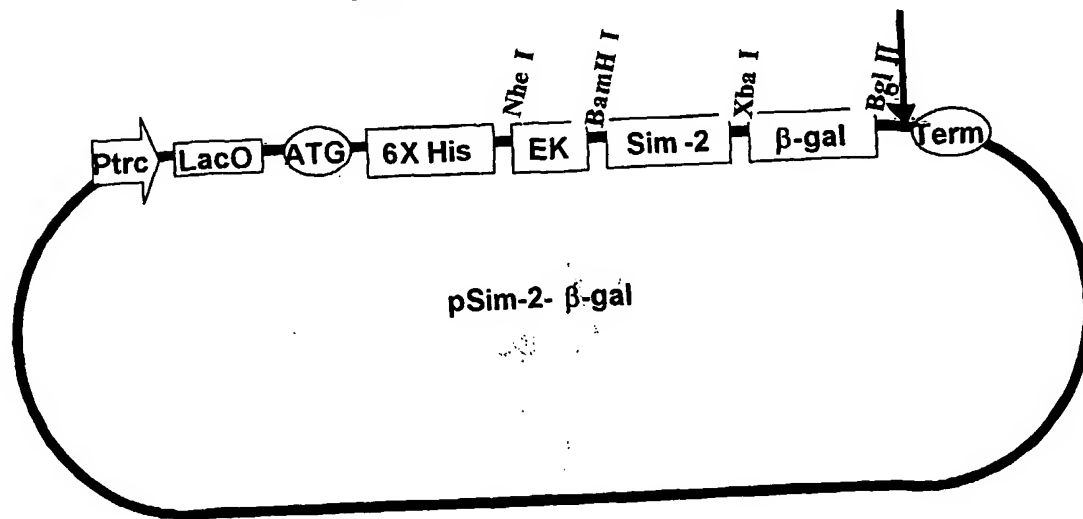
(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: **BIOMOLECULE TRANSDUCTION MOTIF SIM-2-BTM AND THE USE THEREOF**

MCS (Pst I, KpnI, EcoRI, BstBI, Hind III)



(57) Abstract: This invention is about a novel Biomolecule Transduction Motif (BTM), Sim-2 peptide, which has a potential to transduce many biological response modifiers effectively into the cytoplasm, intracellular organelles or nucleus of prokaryotic or eukaryotic cells in vivo and in vitro, and the related technological methods using Sim-2 BTM. This Sim-2 BTM can be used for Drug Delivery System, development of new recombinant protein vaccines or DNA/RNA vaccines, gene and protein therapy, production of pharmacologically or medicinally useful proteins or pharmacomedicinal drug therapy.

WO 03/059940 A1